

5. Faye Davis purchased Subfile No. 4-0003 from Gene Sanchez, who was Abram Cordova, Jr.'s uncle. Prior to this time, Abram Cordova, Jr. irrigated and harvested the land for his uncle just as he currently does for Ms. Davis. *Tr. 1/28/03 at 103-104, 142; Tr. 1/29/03 at 175.*
6. Subfile No.4-0005, which is located immediately adjacent to and downslope of the western boundary of Subfile No. 4-0004, has been cultivated and harvested by Rogelio Corrales for many years. *Tr. 1/28/03 at 146-147.*
7. Tracts 4-0003, 4-0004 and 4-0005 have been irrigated and harvested for many years. *Tr. 1/28/03 at 142-143, 147.*
8. Mr. Cordova diverts water for irrigation from the Rio Capulin by blocking the flow of the Rio Capulin with clods of dirt and pieces of plywood in order to irrigate the two tracts. *Def. Ex. 38, Def. Ex. 39; Tr. 1/28/03 at 106-112, 134, 149-150, 157-158; Tr. 1/29/03 at 188-182.*
9. In order to irrigate Tract 4-0003, Mr. Cordova diverts water at a point in the southeastern quadrant of the tract, near where the Rio Capulin enters the tract. Once diverted from the Rio Capulin, the water spreads and flows generally in a west-southwesterly direction. *Def. Ex. 38, 39; Tr. 1/28/03 at 109-113.*
10. In order to irrigate Tract 4-0004, Mr. Cordova diverts water at a point in the northwestern quadrant of the Tract 4-0003, which is the same point from which water is diverted to the ditch labeled as "Unnamed Ditch No. 1" on Def. Ex. 38 and State Ex. 4 & 5. From this point the water flows westerly and onto Subfile No. 4-0005. *Def. Ex. 38, 39; Tr. 1/28/03 at 111-112, 149, 157.*
11. A channel that contains the Rio Capulin runs between the two points of diversion. *Tr. 1/28/03 at 133; Tr. 1/30/03 at 19-20, 22.*
12. The channel is manmade and was created to capture the river's flow. *Tr. 1/29/03 at 141, 178-180, 187-188.*

13. Due to flooding, the course of the Rio Capulin has changed over time. *Tr. 1/28/03 at 126-127; Tr. 1/29/03 at 176; Tr. 1/30/03 at 23.*
14. Because of the changes in the river course, Mr. Cordova has changed how he spreads the water over the land during time. *Tr. 1/28/03 at 125-127; Tr. 1/29/03 at 176.*
15. Small lateral ditches exist on both tracts. *Def. Ex. 11(5), 11(8), 11(9); Tr. 1/28/03 at 150, 156-157, 163.*
16. Mr. Cordova usually irrigates in June. *Tr. 1/28/03 at 134-139.*
17. Grasses found on the tracts include introduced redtop, introduced fescue, barley, native switchgrass, and introduced timothy, all of which are harvested whenever possible. *Tr. 1/28/03 at 104; Def. Ex. 9 at 1-2; Tr. 1/29/03 at 138-140.*
18. Mr. Cordova has had to plow the fields and has sown timothy grass. *Tr. 1/28/03 at 139; Def. Ex. 9.*
19. Mr. Cordova's business arrangement with Ms. Davis is that the harvest is split, with 60 percent going to the Cordovas and 40 percent going to Ms. Davis. The Cordova family uses the harvested hay to feed its own livestock. Ms. Davis sells her share of the harvest. *Tr. 1/28/03 at 105, 142, 143; Tr. 1/29/03 at 185.*
20. In 2001, when Mr. Cordova irrigated both tracts, he was able to harvest about 2000 bales of hay, of which 800 came from Subfile No. 4-0003 and 1200 from Subfile No. 4-0004. *Tr. 1/28/03 at 116-117.*
21. The condition of tracts 4-0003 and 4-0005 can change in an irrigation season, depending on the availability of surface water and the occurrence of rain. *Tr. 1/28/03 at 126-127.*
22. There was insufficient water in spring 2002 to irrigate the tracts and the tracts were not irrigated. *Tr. 1/28/03 at 114-115.*

23. Conditions during the months May-August 2002 varied. On July 19, 2002, conditions on Tract 4-0003 and 4-0004 were dry, with areas of bare earth without vegetation and areas of short grasses, which was not enough to harvest.. *Def. Ex. 10(1), 10(2), 10(3), 11(2), 11(3); Tr. 1/28/03 at 106, 115-117, 144, 153-154.*
24. In order to harvest grass hay, the tracts must be irrigated. *Tr. 1/28/03 at 128-129.*
25. In late summer 2002, rainstorms caused flooding to occur on Tracts 4-003 and 4-004. *Tr. 1/28/03 at 118-121; Def. Ex. 10(6).*
26. Late summer rains can make harvesting the crop difficult, as the fields can become too wet to operate machinery. *Tr. 1/28/03 at 128.*
27. Each year, Mr. Cordova will harvest the entirety of Subfile Nos. 4-0003 and 4-0004, except in places where it is too wet. The area that can not be harvested varies from year to year. *Tr. 1/28/03 at 138-139.*
28. The plant type community found on the subfile tracts is classified as Baltic rush-redtop community type, which includes many introduced grasses that are used for livestock forage and which is a community type vegetation that can be increased by grazing. *Def Ex. 9 at 3; Tr. 1/29/03 at 147.*
29. Baltic rush-redtop community type vegetation is maintained by surface flooding on an annual or biannual basis. *Def. Ex. 9at 3; Tr. 1/29/03 at 147.*
30. Baltic rush-redtop community type vegagation contains many grass and forb species that are “faculative wetland” species. *Tr. 1/29/03 at 144-145.*
31. Faculative wetland species are those species that would be found in both wetland and non-wetland areas, including irrigated meadows. *Tr. 1/29/03 at 144-146.*

32. Faculative wetland species tolerate wet soil, but can also be dried out completely. They do not require saturated soil conditions, but do require wetting such as through periodic *flooding* *Tr. 1/29/03 at 160.*
33. Plant species existing on Subfile Nos. Tracts 4-003 and 4-0004 commonly exist in irrigated areas. *Tr. 1/29/03 at 160-162.*
34. Periodic irrigation, combined with poor drainage and high clay content in the soil, creates conditions that support faculative wetland species. The fact that there are faculative wetland species existing on the land does not support a conclusion that artesian water sources irrigate the tracts in question. *Def. Ex. 9; Tr. 1/29/03 at 170.*
35. The fact that there are several pocket gopher, or ratas, diggings found on the subfile tracts indicate that the soil is not continuously wet. *Def. Ex. 9 at 1, Def. Ex. 10(8); Tr. 1/28/03 at 123-124; Tr. 1/29/03 at 149, 165-166.*
36. Soil conditions range from dry to moist on the subfile tracts. *Tr. 1/28/03 at 198-208; Tr. 1/29/03 at 84-85.*
37. The majority of soil samples collected by the OSE from tracts 4-0003 and 4-0004 in May 21, 2002 were dry. *State Ex. 3 at 5-6.*
38. Plant growth can not occur unless there is water applied at the time the seed germinates and unless there is moisture in the root zone. *Tr. 1/29/03, Dunmire at 170-171.*
39. Although there is an area where cattails exist at the western edge of tract Subfile No. 4-0004, there are no such marshy areas on Subfile No. 4-0003. *Def. Ex. 9 at 2; Tr. 1/28/03 at 160; Tr. 1/29/03 at 129, 139-140, 148.*
40. No springs or artesian water sources exist upon Subfile Nos. 4-0003 or 4-0004.

41. The tracts in question are located within the flood plain of the Rio Capulin and are periodically flooded by flows from the Rio Capulin during spring run-off season and during storm events in the late summer. *Def. Ex. 8 at 1, 2 Cordova; Tr. 1/30/03 at 19.*
42. The topography of the subfile tracts is relatively flat, with a general decline in gradient from east to west. *Def. Ex. 8 at 1,2; Tr. 1/28/03 at 172.*
43. Much of the soil underlying the tracts has a high clay content. *State Ex. 3 at 17-18; Def. Ex. 8 at 2; Tr. 1/30/03 at 6.*
44. Clay soils have high water retention properties and lead to poor surface drainage. *Def. Ex 8 at 1; Tr. 1/29/03 at 35; Tr. 1/30/03 at 10-12.*
45. The combination of flat terrain, clay soils, poor surface drainage , and introduction of surface water creates an environment for wetland type conditions and shallow perched aquifers on the subfile tracts. *Def. Ex. 8 at 2; Tr. 1/30/03 at 11, 13.*
46. Surface water introduced by irrigation will have the same effect as surface water introduced by natural flooding, and shallow perched aquifers may result from retention of surface water irrigation flows. *Def. Ex. 8 at 3; State Ex 3 at 1.*
47. It is reasonable to assume that the moist soil conditions sometimes found on subfile tracts 4-0003 and 4-0004 are a result of the flat terrain, clay soils and poor surface drainage.
48. The Gallina area is geohydrologically complex and obtaining groundwater through drilling wells in the vicinity of the tracts is highly unpredictable. *Def. Ex. 41 at 3, 41.*
49. It is difficult to determine whether the surface streams are connected to the aquifer or whether groundwater pumping in the vicinity of the subfile tracts could potentially affect stream flows in the area. *Def. Ex. 41 at 8, 14.*

50. There are no springs or seeps located on the subfile tracts. *Tr. 1/29/03 at 108; Tr. 1/30/03 at 15.*
51. There is a spring located at some distance upstream and to the east of the subfile tracts that contributes to the surface flow of the Rio Capulin. *Tr. 1/30/03 at 36.*
52. According to the 1988 State Engineer Technical Division Hydrology Report 88-2, there are seventeen wells within the vicinity of the subfile tracts, some of which are dry and some of which produce water and some that can be described as “flowing at times.” *Def. Ex. 41, 42.*
53. Four of the wells identified by Hydrology Report 88-2 were dry, including the three wells that were closest to the proposed drilling site. The closest well RG 43761 produces ½ gallon per minute from a brown clay formation located at a depth of 180-200 ft. *Def. Ex. 8, Att. A. Well Record RG 43761; Def. Ex. 41 at 4, 18.*
54. If one were to dig a hole in saturated soil conditions, one would expect the hole to act as a well and yield water. *Tr. 1/29/03 at 58.*
55. There was no water found in any of several holes dug to a depth of 18-20 inches on tracts 4-0003 and 4-004 on August 30, 2002. *Def. Ex. 10(4), 11(4). Tr. 1/28/03, Cordova at 121-122; Rael at 155-156.*
56. Well logs of the study do not contain data that supports the theory of upward flow from artesian sources. *Def. Ex. 8 at 1, Att. A.*
57. Although existing geohydrologic conditions could create the potential for artesian flows in the area of subfile tracts, there is no specific data or observable field conditions that support a hypothesis that vegetation on the subfile tracts is supported by artesian flows. *Tr. 1/29/03 at 75-76; Tr. 1/30/03 at 14-17, 31.*

Proposed Conclusions of Law

1. Beneficial use is the basis, measure and limit of the right to use water. NM Const. Art. XVI, Sec. 4.
2. Beneficial use is the use of such water as may be necessary for some useful and beneficial purpose in connection with the land from which it is taken. Erickson v. McLean, 62 N.M. 264 308 P.2d 983 (1957).
3. An appropriation of water is perfected by the taking or diversion of water from a natural stream or other source of water supply, with the intent to apply it to some beneficial use of purpose. Harkey v. Smith, 31 N.M. 521, 247 P. 550 (1926).
4. An appropriation of water requires intent to use the water and actual application to beneficial use.
5. There is no requirement that the diversion works that accomplish the taking be permanent or conform to any standard, only that the means of diversion is “man-made”, thus manifesting intent, as opposed to naturally occurring. State of New Mexico ex rel. Reynolds v. Miranda, 83 N.M. 443, 493 P.2d 409 (1972).
6. A diversion structure made of plywood, reinforced with dirt clods, is man-made. Diversion of water from the Rio Capulin would not occur in absence of the plywood diversion structure.
7. Cultivation of crops is a beneficial use of water. State ex rel. Martinez v. McDermott, 120 N.M.327, 901 P.2d 745 (1995).
8. Water for the cultivation and harvesting of introduced pasture grasses is a beneficial use of water.
9. Subfiles No. 4-0003 and 4-0004 have valid water rights.

Respectfully submitted,



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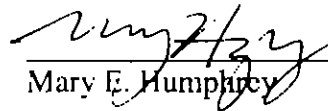
CERTIFICATE OF SERVICE

I certify that a copy of this pleading was mailed to the following persons on the 2nd day of May, 2003.

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